REMARKS

This application has been reviewed in light of the Office Action mailed on April 18, 2005. Claims 1-8 are pending in the application. By the present amendment, Claim 1 has been amended. No new matter or issues are believed to be introduced by the amendments.

Double Patenting

In the Office Action, the Examiner rejected Claims 1-8 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-3 and 5 of co-pending Application No. 10/912,470. Claim 1 of the present application, as well as Claim 1 of the co-pending application, have been amended in a manner which is believed to obviate the provisional obviousness-type double patenting rejection over Claims 1-3 and 5 of co-pending Application No. 10/912,470. Accordingly, withdrawal of the provisional obviousness-type double patenting rejection with respect to Claims 1-3 and 5 of the present application is respectfully requested.

35 U.S.C. § 103 (a)

In the Office Action, Claims 1, 4, and 6-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,114,996A – Ngheim in view of U.S. Patent No. 4,587,524 - Hall. Claim 1 has been amended to better define Applicants' invention and to overcome the cited rejection.

Claim 1 now recites:

1. (Currently Amended) A wireless terminal comprising a ground conductor housing and a transceiver housed by said ground conductor housing and coupled to an antenna feed,

wherein the antenna feed is coupled directly to the ground conductor housing via a capacitor formed by a conducting plate and a portion of the ground conductor housing, said plate having a non-resonant length substantially less than a wavelength, and

wherein a slot, partially located underneath the conducting plate, is provided in the ground conductor housing such that said coupling occurs across the slot substantially at its open end, and

wherein the wireless terminal comprises a single port and a single ground plane.

Ngheim is directed to an increased bandwidth patch antenna which includes first and second arms spaced by an air gap – See Ngheim at Col. 2, lines 14-21. By contrast, the present invention is directed to a capacitive feed antenna. The features that distinguish a patch antenna from a capacitive feed antenna are that a patch antenna is generally of a length such that at the operating frequencies it is self-resonant. Ngheim illustrates in Fig.1, a "radiating arm" that is a quarter of a wavelength long. Ngheim further teaches in claim 1 - *a patch antenna 1 comprising a radiating arm having a length of approximately a multiple of one quarter wavelength of an operating frequency of interest.*

In sharp contrast, the capacitive feed antenna of the invention has a plate size as a non-resonant length that is substantially less than a wavelength.

It is therefore respectfully submitted that Ngheim does not disclose (or suggest), " a wireless terminal comprising a ground conductor housing, ..., wherein said ground conductor housing is coupled to said antenna feed via a parallel plate capacitor formed by a plate and a

surface of said ground conductor housing, said plate having a non-resonant length substantially less than a wavelength", as recited in Claim 1 as amended.

Hall is directed to a reduced height monopole/slot antenna having generally parallel spaced ground planes, the upper one of which has a slot therein. Hall does not disclose or suggest an antenna feed directly coupled to a ground conductor housing via a capacitor formed by a conducting plate and a portion of the ground conductor housing, wherein a slot, partially located underneath the conducting plate, is provided in the ground conductor housing such that the coupling occurs across the slot substantially at its open end, as recited in Claim 1. Hall teaches the monopoles in conjunction with the half-wave slots are closed at both ends. An advantage of having a shorter open-ended slot is twofold. It saves space and ensures that the coupling plate is at the top of the device out of the way of the user's hands.

Further distinguishing aspects between the monopole/slot antenna structure of Hall and the present invention include, the monopole/slot antenna of Hall utilizes a second solid ground plane 14 beneath the first ground plane 12 and stripline 20, while the wireless terminal of the invention includes a single ground plane, as recited in Claim 1. Secondly, in the monopole/slot antenna of Hall, the stripline feed extends across the gap under the slot. This is not true of the wireless terminal of the invention. Third, Hall teaches the use of a port on either end of the feed line to maintain stable impedance over a wide band. In contrast, the wireless terminal of the invention utilizes a single port, as recited in Claim 1, to ensure that signals fed into the single port are radiated as opposed to being dissipated in a second port.

Accordingly, it is respectfully requested that the rejection under 35 USC 101 of independent Claim 1 be withdrawn, and independent Claim 1 be allowed.

Claims 2-8 depend from Claim 1, and therefore include the limitations of Claim 1. Hence, for the same reasons given above for Claim 2-8 are believed to contain patentable subject matter. Accordingly, withdrawal of the rejection with respect to Claims 2-8 and allowance thereof are respectfully requested.

35 U.S.C. §103(a)

In the Office Action, Claims 2, 3 and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ngheim and Hall and further in view of U.S. Patent No. 6,002,367A – Engbloom.

Claims 2, 3 and 5 depend from independent Claim 1, and therefore contains the limitations of Claim 1. Hence, for at least the same reasons given for Claims 1, Claims 2, 3 and 5 are believed to be allowable over the cited references, alone and in combination. .

Accordingly, applicants respectfully request that the rejection under 35 U.S.C. §103(a) with respect to Claims 2, 3 and 5 and allowance thereof is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-8 are believed to be in condition for allowance and patentably distinguishable over the art of record.

Respectfully submitted,

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